



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1113-5/04a HUF-Abtas	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/011941	International filing date (day/month/year) 28 October 2003 (28.10.2003)	Priority date (day/month/year) 24 March 2003 (24.03.2003)
International Patent Classification (IPC) or national classification and IPC E05B 29/00		
Applicant HUF HÜLSBECK & FÜRST GMBH & CO. KG		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>41</u> sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 10 September 2004 (10.09.2004)	Date of completion of this report 18 April 2005 (18.04.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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International application No.

PCT/EP2003/011941

I. Basis of the report

1. With regard to the elements of the international application:*

the international application as originally filed

the description:

pages _____, as originally filed
 pages _____, filed with the demand
 pages 1-19, filed with the letter of 01 September 2004 (01.09.2004)

the claims:

pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19)
 pages _____, filed with the demand
 pages 1-29, filed with the letter of 01 September 2004 (01.09.2004)

the drawings:

pages _____, as originally filed
 pages _____, filed with the demand
 pages 1/13-13/13, filed with the letter of 01 September 2004 (01.09.2004)

the sequence listing part of the description:

pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
 the language of publication of the international application (under Rule 48.3(b)).
 the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority in written form.
 furnished subsequently to this Authority in computer readable form.
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, Nos. _____
 the drawings, sheets/fig. _____

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-29	YES
	Claims		NO
Inventive step (IS)	Claims	1-29	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-29	YES
	Claims		NO

2. Citations and explanations

1. This report makes reference to the following documents:

D1: GB 461 025 A (EDWARD CAMDEN FRYER; FRANCIS JOSEPH BUTTER; JOSIAH PARKES AND SONS LTD)
9 February 1937 (1937-02-09)

D2: EP-A-0 063 223 (DELWING DIETER)
27 October 1982 (1982-10-27)

2. The description and the drawings in the application make clear that the plate-shaped tumblers (31.3-34.3; 31.4-33.4) differ (cf. page 7, lines 7-8) and that the tumblers (31.3-34.3; 31.4-33.4) have control edges (41.3-44.3; 41.4-43.4) arranged at specific different heights (cf. page 7, lines 19-21).

Claim 1 has been interpreted correspondingly.

3. D1, which is considered to represent the prior art closest to the subject matter of claim 1, discloses a cylinder lock according to the preamble of claim 1.

The subject matter of claim 1 thus differs from D1 in particular in that:

- the insert consists of a comb-like body (comb 62.3; 62.4) with teeth (36.3, 36.3'; 36.4, 36.4') which has at its inner end (64.3; 64.4) a profile with at least one pair of flanks facing away from each other (37.3a/38.3a, 37.3i/38.3i; 37.4/38.4, 37.4'/38.4'),
- whereas the cutouts (26.3; 26.4) in the tumblers (31.3-34.3; 31.4-34.4) have at least one pair of mating flanks (mating flank pair 27.3a/28.3a; 27.3i/28.3i; 27.4a/28.4a; 27.4i/28.4i) which are differently positioned if the control edges (41.3-44.3; 41.4-43.4) of the tumblers (31.3-4.3; 31.4-34.4) lie at different heights and
- the flank pairs (37.3a/38.3a, 37.3i/38.3I; 37.4/38.4, 37.4'/38.4') and the mating flank pairs (27.3a/28.3a; 27.3i/28.3i; 27.4a/28.4a; 27.4i/28.4i) are arranged such that in the case that a comb has been inserted (62.3; 62.4) and a key withdrawn the control edges (41.3-44.3: 41.4-43.4) of at least two different tumblers (31.3-34.3; 31.4-34.4) lie at the same height (50.4, 60.3, 60.4; 50.5, 60.5, 60.6).

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

4. The problem addressed by the present invention may therefore be considered that of improving the security of a cylinder lock of the type initially indicated.

The solution proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)). The reasons are:

Although in D2 (cf. page 6, lines 19-27, and figure 3) the longitudinal cutouts (11, 11a) of the individual tumbler plates (3) differ in length, enabling different insertion depths (16) in the lower locking groove (8), D2 does not disclose that "in the case that a key has been withdrawn, the control edges of at least two **different** tumblers (3) lie at the same height".

This feature has the effect that the actual position of the control edges of the tumblers is not visible to unauthorized persons, in particular:

- when a flank (38.3i) is adjacent to a mating flank (28.3i), the spring-loaded (13.3; 13.4) tumblers (31.3-34.3; 31.4-34.4) being in the neutral position,
- and/or when, in an actuating position, the other flank (37.3i) strikes against the other mating flank (27.3i) at maximum displacement (77) of the tumblers (31.3-34.3; 31.4-34.4) by a burglary tool.

5. Claims 2-29 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and independent step.

6. INDUSTRIAL APPLICABILITY

Claims 1-29 are industrially applicable (PCT Article

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33(4)) in the area of locking devices.